

WHAT IS CLAIMED IS:

1. A cooperative processing apparatus comprising:

a sending and receiving unit for sending and receiving cooperation information to be used for executing a flow of services on document data in a cooperative manner and a processing result of a service to and from other cooperative processing apparatus;

a service processing unit for performing a prescribed service on the basis of the cooperation information; and

a control unit for performing:

a first control of controlling, when receiving cooperation information, the service processing unit so that it performs the service on the basis of the cooperation information;

a second control of sending, to a transmission source apparatus of the cooperation information, a processing result indicating whether the service processing unit has performed the service normally or abnormally, and, if the service processing unit has performed the service normally, copying the cooperation information and controlling the sending and receiving unit so that it sends one piece of cooperation information to a cooperative processing apparatus that is to perform a next service on the basis of the cooperation information; and

a third control of controlling the sending and receiving unit so that it sends the other piece of cooperation information to a cooperative processing apparatus capable of performing a substitute service for the next service when an abnormality has occurred in the cooperative processing apparatus in performing the next service after receiving the cooperation information.

2. The cooperative processing apparatus according to claim 1, wherein in the third control the control unit judges that an abnormality has occurred in the cooperative

processing apparatus in performing the next service after receiving the cooperation information if a processing result of the next service received from the cooperative processing apparatus for performing the next service indicates occurrence of an abnormality or if no processing result of the next service is received in a prescribed period of time from the cooperative processing apparatus for performing the next service.

3. The cooperative processing apparatus according to claim 1, wherein in the third control the control unit suspends the flow and controls the sending and receiving unit so that it sends a processing result indicating occurrence of an abnormality to a cooperative processing apparatus that sent the cooperative information first if no processing result of the next service or the substitute service for the next service is received within a predetermined processing period of time or if there exists no cooperative processing apparatus capable of performing a substitute service for the next service.

4. A cooperative processing method comprising:

a first control step of controlling a service processing unit for performing a service so that it performs the prescribed service on the basis of cooperation information when the cooperation information is received by a sending and receiving unit for sending and receiving cooperation information to be used for executing a prescribed flow of services on document data in a cooperative manner and a processing result of a service to and from other cooperative processing apparatus;

a second control step of sending, to a transmission source of the cooperation information, a processing result indicating whether the service processing unit has performed the service normally or abnormally, and, if the service processing unit has performed the service normally, copying the cooperation information and controlling the sending and receiving unit so that it sends one piece of cooperation information to a

cooperative processing apparatus that is to perform a next service on the basis of the cooperation information; and

a third control step of controlling the sending and receiving unit so that it sends the other piece of cooperation information to a cooperative processing apparatus capable of performing a substitute service for the next service when an abnormality has occurred in the cooperative processing apparatus in performing the next service after receiving the cooperation information.

5. The cooperative processing method according to claim 4, wherein the third control step judges that an abnormality has occurred in the cooperative processing apparatus in performing the next service after receiving the cooperation information if a processing result of the next service received from the cooperative processing apparatus for performing the next service indicates occurrence of an abnormality or if no processing result of the next service is received in a prescribed period of time from the cooperative processing apparatus for performing the next service.

6. The cooperative processing method according to claim 4, wherein the third control step suspends the flow and controls the sending and receiving unit so that it sends a processing result indicating occurrence of an abnormality to a cooperative processing apparatus that sent the cooperative information first if no processing result of the next service or the substitute service for the next service is received within a predetermined processing period of time or if there exists no cooperative processing apparatus capable of performing a substitute service for the next service.